

REMARKS

In the specification, the paragraph [0017] has been amended to correct minor editorial problems. The units "nm²" are units of area, as noted by the Examiner, and the paragraph has been amended to reflect this.

Applicant has additionally amended claims 1-3 and added claim 32. No new matter has been added. The subject matter of the amendments to the claims may be found in the Specification as filed.

Claims 2 and 3 are rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement. Claims 2 and 3 have been amended so that the units "nm²" are consistent with an area measurement as intended by the applicants. Applicant believes that this amendment overcomes the 35 U.S.C. §112 rejection.

Claims 1-3, 5-8, 10, and 13 are rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by WO 96/12541. Applicant believes that WO 96/12541 does not disclose all the elements of the claims and therefore the present application is not anticipated by WO 96/12541. For example, WO 96/12541 does not disclose nanochannels. As noted in the Specification at [0015], "the term 'nanoscale channel' refers to any void space in a surface of a substrate having a diameter in at least one direction of about one to about 500 nm." A nanometer is 10⁻⁹ meters. In contrast, the channels shown in WO 96/12541 are microscale channels (10⁻⁶ meters). Microscale channels would be several orders of magnitude too large to perform the molecular sieving functions of the present invention. The design of the present invention creates a tortuous path through nanoscale channels on the molecular scale (nm), these nanometer scale physical constrictions impart molecular size-based sieving capacity.

Additionally, Applicant has amended claim 1 to include the limitation of a substrate having at least about 1000 nanochannels. As noted by the Examiner, WO 96/12541 does not disclose a device having at least about 1000 channels.

Applicant further does not believe that a third and fourth substrate would be implicit in WO 96/12541. Embodiments of the present invention provide a plurality of channels, such as those shown in Figure 3, in which the channels are open at the edges

of the substrate but no fluid flow is desired to these edges. Providing the second and third substrates allows this unwanted fluid flow to be blocked and a path to be created between the channels of the first and second substrate. WO 96/12541 does not disclose a device in which a plurality of channel outlets in need of blocking are created at the edges of the device, therefore a third and fourth substrate would be unnecessary and not implicit in WO 96/12541.

Claims 1-3 and 5-11 are rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by Ramsey, et al. (US 2005/0103713). Applicant believes that this rejection is improper since the present application was filed on December 17, 2003 at least 6 months before the filing of Ramsey, et al. which has a filing date of July 30, 2004. Since the present application has an earlier effective filing date than Ramsey, et al., Ramsey, et al. does not qualify as prior art under 35 U.S.C. §102(e). Applicant respectfully requests that the 35 U.S.C. §102(e) rejection over Ramsey, et al. be withdrawn.

Claims 4 and 12 are rejected under 35 U.S.C. §103 as being unpatentable over Ramsey in view of WO 96/12541, or alternatively, WO 96/12541 in view of Ramsey. As argued above, since the present application was filed on December 17, 2003 and Ramsey was filed on July 30, 2004, Ramsey does not qualify as prior art under 35 U.S.C. §103. Further, an obviousness rejection under 35 U.S.C. § 103 requires that all the elements of a claim to be found in the references cited to form the rejection. ("The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." "To establish a *prima facie* case of obviousness... [inter alia] the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P § 2142). For reasons argued above, WO 96/12541 does not include all the limitations of the claims, such as for example, nanoscale channels, a device having at least about 1000 channels, and third and fourth substrates. Thus, Applicant respectfully requests that the 35 U.S.C. §103 rejection over and/ or in view of Ramsey, et al. and WO 96/12541 be withdrawn.

CONCLUSION

Allowance of the present application is earnestly sought.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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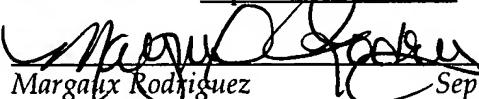
Dated: September 27, 2006

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, Post Office Box 1450, Alexandria, Virginia 22313-1450 on September 27, 2006.


Margarita Rodriguez September 27, 2006